

thioalkyl, thioaryl, —SO₂R¹, —SOR¹, —SO₂OR¹, F, Cl, Br, and I; R¹ and R² can be the same or different, and each is selected from the group consisting of hydrogen, C₁-C₁₀ alkyl, C₁-C₁₀ heteroalkyl, aryl, heteroaryl, hydroxy, F, Cl, Br, and I, and m = 0-2.

5 123. The article of claim 122, wherein the structure comprises a 1-, 2- or 3- dimensional array of n monomer units.

124. The article of claim 122, wherein the four  units comprise a macrocycle.

10 125. The article of claim 124, wherein the macrocycle is selected from the group consisting of cyclams, phthalocyanines and porphyrins.

126. The article of claim 124, wherein the metal ion is a transition metal ion.

15